probably *69* (handwritten top-left)

UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/042,836	01/08/2002	Eyal Oren	06057	4503

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THE LAW OFFICE OF KIRK D. WILLIAMS
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EXAMINER
CHACE, CHRISTIAN

ART UNIT	PAPER NUMBER
2187	

DATE MAILED: 01/21/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on *26 December 2004*.

2a) ☐ This action is **FINAL.**   2b) ☒ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
   closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) *18,19 and 27-31* is/are pending in the application.

    4a) Of the above claim(s) *18 and 19* is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) *27-31* is/are rejected.

7) ☐ Claim(s) _____ is/are objected to.

8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a) ☐ All b) ☐ Some * c) ☐ None of:

        1. ☐ Certified copies of the priority documents have been received.

        2. ☐ Certified copies of the priority documents have been received in Application No. _____.

        3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage
   application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.

5) ☐ Notice of Informal Patent Application (PTO-152)

6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

This Office action has been issued in response to AFTER-FINAL amendment

filed 26 December 2004. Throughout prosecution of the instant application to date,

examiner has indicated claims 27-31 as being allowable, based on "means-plus-

function" language allegedly invoking 35 USC 112, 6th paragraph. However, upon final

review of the instant application prior to allowance, examiner has noted that the

functionally defined and disclosed means and their equivalents are so broad that they

encompass any and every means for performing the recited functions. For example,

the "means for generating a plurality of lookup words" are produced, "Using data item

403 and a predetermined set of decoder fields typically stored in data structure (e.g.,

data structure 500 illustrated in FIG. 5A) or generated via a mechanism (e.g., control

logic 211 of FIG. 2A, lookup word generator 310 of FIG. 3, shift register 520 of Fig. B,

etc.)," as discussed at lines 24-27 of page 13 of the instant specification. Accordingly,

the specification allows for anything to produce the plurality of lookup words. This fact

was actually observed with respect to claims 1-3 and 5-17 by examiner the in the

response to arguments section of the previous Office action as well. Therefore, in

accordance with MPEP 2183, the burden must be placed on the applicant to

demonstrate that the claims are truly drawn to specific apparatus distinct from other

apparatus capable of performing the identical functions. (*In re Walter*, 618 F.2d 758,

768, 205 USPQ 397, 407-08 (CCPA 1980)).

As per MPEP 706.07(e), which recites, "When a final rejection is withdrawn, all amendments filed after the final rejection are ordinarily entered," the after-final amendment filed 26 December 2004 has been entered. Claims 1-17 and 20-26 are canceled. Claims 18-19 are pending and withdrawn. Claims 27-31 are also pending, and now rejected. This action is NOT final.

Examiner sincerely apologizes for any inconvenience caused by this oversight, and genuinely regrets any such inconvenience.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 27-31 are rejected under 35 U.S.C. 102(a) and (e) as being anticipated by Uzun (US Patent #6,606,681).

The applied reference has a common assignee with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in

the reference was derived from the inventor of this application and is thus not the invention "by another," or by an appropriate showing under 37 CFR 1.131.

With respect to independent claim 27, a method is disclosed in the abstract.

Programming is interpreted by examiner to be writing. An associative memory is defined in the instant specification to be, "all types of known or developed associative memories...and other data structures," on page 7,line 16. Accordingly, optimized CAM block 202 is a "data structure." A plurality of sets of entries is disclosed in column 10, lines 60-61 as "entries in CAM 256" which is part of optimized CAM block 202. Each of the plurality of sets of entries being associated with a different one of a plurality of unique decoder fields, and each entry within a particular one of the plurality of sets of entries including a same one of the plurality of unique decoder fields is disclosed in column 10, lines 61-62, with tag bits #402 being the decoder value, and Key #404 being the entry. See figure 4.

Receiving a piece of information and deriving a first lookup word are interpreted by examiner to be the same thing. The instant claim recites, "...a piece of information including a data item and a decoder value." The instant claim also recites, "...a first lookup word including a data item and a decoder value." As these two definitions are exactly the same, examiner has interpreted the piece of information as being the first lookup word. Also, as they are the same thing, "receiving" it *is* "deriving" it (regardless of any other *examples* [i.e., not limiting, as applicants are s careful to point out throughout the specification] discussed in the instant specification). The piece of information/look up word id disclosed in figure 4. Figure 4 is discussed in column 10

into column 11. Column 11, lines 15-17 specifically discuss using the piece of information/lookup word for evaluation. In order to be evaluated, it must, inherently, be received. The data item is key #404 and the decoder value is tag bits #402 from figure 4. Performing a lookup operation on the associative memory using the first lookup word to generate a first lookup result is disclosed in column 6, lines 34 and 38-39 as returning an address for a matching entry.

Receiving a second piece of information including a data item and a nested condition indication is disclosed in column 5, lines 33-37. A nested condition is extracted address information, as a nested condition is merely one constant inside another. If address information must be extracted, clearly, it must be extracted from something (constant), of which it was inside.

Identifying the nested condition is inherent in a nested condition indication. In other words, if a nested condition is indicated, it is inherently identified.

Generating a plurality of lookup words in response to said identifying, each of the plurality of lookup words including the data item and one of a plurality of predetermined decoder values is disclosed in column 6, lines 34 and 38-39, and also in TABLE 1, with DA/SA bits being, "...one of a plurality....values."

With respect to claim 28, as discussed supra, the piece of information including a nested condition indication is inherent.

With respect to claim 29, forwarding a lookup indication to "a receiver," which can be anything that receives, as it is not defined further in the specification, is disclosed as a HIT signal in figure 2B.

With respect to claim 30, the lookup indicator indicating the presence or absence

of the nested condition is inherent. As the nested condition is the extracted address

information, as discussed supra, a HIT signal would indicate the address's presence in

the memory. No HIT signal would indicate the absence of the extracted address.

With respect to claim 31, receiving a piece of information including a data item,

and generating a plurality of lookup words with a predefined set of decoder fields of the

plurality of unique decoder fields is also disclosed in column 7, line 57 into column 8,

line 7.

Response to Arguments

No arguments were presented in the instant after-final amendment. However,

examiner has re-printed his arguments from the previous Office action, as they apply to

the claims rejected supra that contain the same subject matter.

With respect to applicants' discussion of alleged confusion by the Office as to the

use of the phrase "nested condition," examiner respectfully wishes to clarify his position

after thorough review of the instant application in light of the telephone conversation

between examiner and applicants' representative on or about September 1, 2004. The

instant specification does not define "nested condition." The disclosure merely offers an

example of what it might be. For example, at page 11 of the instant remarks, applicants

offer what one embodiment uses the term for, and are careful to note that, "…this

explanation is not limiting on the scope of the claims as they stand on their own merit in

light of the entire specification and not just an excerpt discussed herein." While

examiner agrees that one embodiment should limit the scope of claims in a patent

application, the instant application does not define the term with enough specificity to

allow it to overcome the cited prior art of record. This appears to be the central

disagreement between examiner and applicants – is the claim language, read in light of

the instant specification, anticipated by the cited prior art or record? Examiner maintains

that it is, because of the very broad scope of the terms used in the claims. Even looking

to the specification for any further clarification does not affect the interpretation of the

claims, as they are no more narrowly defined therein. Examiner will hopefully clarify his

position even further in the responses below.

With respect to applicants' response to the restriction requirement, as examiner

noted supra, the requirement has been made final, and claims 18-19 are withdrawn.

With respect to the objections to the specification based on 35 USC 112, first

paragraph, examiner respectfully withdraws his objections. If applicants wish to define

"or" as "and" (in their commonly-used senses), as they may be their own lexicographers,

that is their prerogative. Applicants' explanation of the difference between

"programming" and "using" is persuasive. Applicants traverse the objection of use of

the term "wildcards." Applicants assert that the term "wildcard" is a term well known in

the art, and clearly understood by one skilled in the art. However, again, applicants do

not actually define the term, either in the instant remarks, or in the specification. Upon

further investigation, however, the word appears in many patent application publications

and patent in the US database system, so the objection has been removed as the term

is, apparently, a term with an accepted meaning to one of ordinary skill in the art.

Applicants' change of the word "while" tot eh phrase "in one embodiment" is persuasive

to overcome the objection. Applicants' explanation of lines 9-10 on page 15 of the instant specification is persuasive, and the objection has been removed. However, examiner suggests applicants may wish to even more clearly state their intention for the benefit of the public should the instant application pass to issue. With respect to applicants' traversal of the objection to use of the term "context," examiner has withdrawn his objection, but notes that applicants still have not defined the term any more particularly in the specification than it's ordinary meaning would give it – as circumstances surrounding an event, for example. With respect to applicants' traversal of the objection to the specification as not providing antecedent basis for the word, "derive," examiner has withdrawn the objection in response to applicants' amendment of the specification to include the claim language.

With respect to applicants' traversal of the 35 USC 112, first paragraph rejection under the written description requirement, applicants' argument was persuasive, and the rejection has been removed.

However, with respect to applicants' traversal of the 35 USC 112, first paragraph rejection under the enablement requirement, applicants' argument was not persuasive, and has been maintained as discussed supra. One of ordinary skill in the art would not understand how the nested condition would be indicated by another mechanism whereby the piece of information does not include a nested condition indication. Claim 5 recites identifying a nested condition indication associated with a received piece of information. Claim 7 recites that the piece of information does not include a nested condition indication. The disclosure does not enable one of ordinary skill in the art to

apply the limitation of claim 7 to the invention of claim 5. The specification discloses, as applicants discuss in the instant remarks at the bottom of page 14 into page 15, how to use the indication contained *in* the piece of information, but not how to use an indication *not* contained in the piece of information.

With respect to applicants' traversal of examiner's interpretation that receiving a piece of information and deriving a first lookup word in claim 1 are the same thing, examiner respectfully disagrees, and the interpretation has been maintained, as discussed supra.

Receiving a piece of information and deriving a first lookup word are interpreted by examiner to be the same thing. The instant claim recites, "...a piece of information including a data item and a decoder value." The instant claim also recites, "...a first lookup word including a data item and a decoder value." As these two definitions are exactly the same, examiner has interpreted the piece of information as being the first lookup word. Also, as they are the same thing, "receiving" it *is* "deriving" it (regardless of any other *examples* [i.e., not limiting, as applicants are careful to point out throughout the specification] discussed in the instant specification). The piece of information/look up word is disclosed in figure 4. Figure 4 is discussed in column 10 into column 11. Column 11, lines 15-17 specifically discuss using the piece of information/lookup word for evaluation. In order to be evaluated, it must, inherently, be received.

With respect to applicants' argument that Uzun neither teaches nor suggests generating multiple lookup words from a same piece of information in response to the identification of a nested condition, examiner respectfully disagrees. First, applicants

assert, at the top of page 16 of the instant remarks, that, "Uzun's use of N entries with a

K*N entry RAM allows each of the CAM entries to be associated with K memory entries

for storing corresponding values. These are not lookup words." Examiner takes the

position that they are, indeed, lookup words in that they are used to look up other

information. Applicants have not defined the term any more narrowly than that.

Applicants, at page 16 of the instant remarks, assert that providing K contiguous

memory locations for each CAM entry (instead of one) allows more information to be

directly received in response to the match of a lookup word does not teach or suggest

multiple lookup words based on a received piece of information in response to

identifying a nested condition as recited in claim 1. Examiner respectfully disagrees –

when one takes into account that the piece of information and the lookup word are the

same thing, as discussed supra, and that a "nested condition" is exactly what Uzun

describes (K contiguous memory locations for each CAM entry (instead of one), (absent

any more specific definition in the instant disclosure), the cited prior art does, indeed,

anticipate the claim language as discussed supra. Applicants go on to assert that for at

least the reasons discussed in relation to claim 1, claim 5 and it's dependents are also

allowable. Examiner respectfully disagrees for at least the reasons set forth supra with

respect to claim 1 as well.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christian P. Chace whose telephone number is 571.272.4190. The examiner can normally be reached on MAXI FLEX.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Donald Sparks can be reached on 571.272.4201. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Christian P. Chace
Examiner
Art Unit 2187